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# Indian Standard SIZES OF FILM FOR INDUSTRIAL RADIOGRAPHY

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#### Indian Standard

## SIZES OF FILM FOR INDUSTRIAL RADIOGRAPHY

#### O. FOREWORD

- 0.1 This Indian Standard was adopted by the Bureau of Indian Standards on 29 July 1988, after the draft finalized by the Photographic Materials Sectional Committee had been approved by the Chemical Division Council.
- 0.2 This standard covers the sizes of film in sheet form for industrial radiography. In the formulation of this standard, considerable assistance has been drawn from ISO 5655-1982 'Photography—Film for industrial radiography, sizes, quality packaging and labelling', issued

by the International Organization for Standardization (ISO).

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS: 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

#### 1. SCOPE

1.1 This standard specifies the sizes of film, in sheet form, for industrial radiography.

#### 2. DIMENSIONAL STABILITY

2.1 The dimensions and tolerances specified in this standard apply to the film at the time of cutting. Dimensions may alter by a permanent shrinkage due to ageing and by temporary shrinkage or swelling due to changes in moisture content or temperature. However, dimensionally stable films shall be used for these products and at the time of opening the package, the dimensions of the film shall not vary by more than +0.2 to -0.3 percent from the specified dimensions.

#### 3. SIZES

3.1 The nominal and actual sizes of films, in sheet form, for industrial radiography shall conform to the sizes prescribed in Table 1.

#### 4. SQUARENESS OF SHEETS

**4.1** Neither diagonal of any sheet film shall exceed the diagonal of a rectangular sheet of appropriate maximum length and width, nor shall it be less than the diagonal of the rectangular sheet of appropriate minimum length and width.

#### 5. CORNER ROUNDING

5.1 The four corners of the film may be suitably rounded to facilitate handling, to avoid injury and to function properly. If the corners are rounded, the distance from theoretical corner of the film to the cut edge of the film, measured along the bisector of the corner shall not exceed 6.4 mm and shall not be less than 2 mm. The cutting shall not intersect the linear edges of the film by more than 15 mm or less than 2.8 mm from the theoretical corner. The distance from each theoretical film edge to the cut edge, when measured 10 mm from the theoretical corner, shall not exceed 1 mm. The corner shall have no stepped or sharp features (see Fig. 1).

TABLE 1 SIZES OF FILMS IN SHEET FORM, FOR INDUSTRIAL RADIOGRAPHY							
SL	NOMINAL SIZE	ACTUAL SIZE					
No.		Width		Length			
	mm	Minimum mm	Maximum mm	Minimum	Maximum mm		
(1)	(2)	(3)	(4)	(5)	(6)		
i)	$100 \times 400$	97	99	397	<b>3</b> 99		
ii)	$100 \times 480$	97	99	477	479		
iii)	$102 \times 381$	99	101	378	<b>3</b> 80		
iv)	$300 \times 400$	<b>2</b> 97	299	<b>3</b> 97	<b>3</b> 99		
v)	$305 \times 381$	302	304	378	380		
vi)	356 × 432	353	355	429	431		

<sup>\*</sup>Rules for rounding off numerical values (revised).

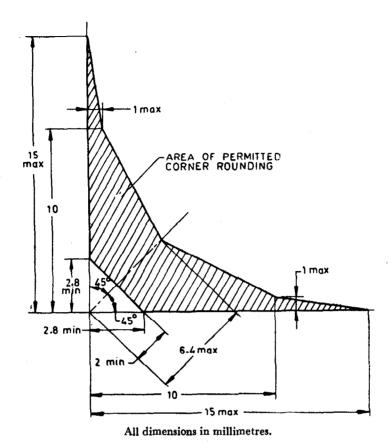


Fig. 1 Corner Rounding Limits

#### 6. QUANTITY OF PACKING

6.1 For all sizes, the number of sheets of film for industrial radiography in a single packing shall be 25, 50, 75 or 100 sheets.

#### 7. MARKING

- 7.1 Each package shall be marked with, besides other normal information, the nominal size of the films contained in it.
- 7.2 The packages may also be marked with the Standard Mark.

Note — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

#### 8. SAMPLING

8.1 Lot — All the films in sheet form produced under similar conditions and of the same size

shall be put together to constitute a lot.

- 8.2 In order to ascertain the conformity of the lot to the requirements of this specification, the sample shall be tested for different characteristics.
- 8.3 The number of films to be selected from a lot shall be in accordance with col 1, 2 and 3 of Table 2.

TABLE 2 NUMBER OF FILMS TO BE SELECTED FOR SAMPLING

(Clauses 8.3, 8.5 and 8.6)

LOT SIZE (PACKETS)	No, of Packets to be Selected	No. of Films to be Selected	Accep- tance Number
(1)	(2)	(3)	(4)
Up to 15	2	8	0
16 to 25	3	13	1
26 to 100	5	20	1
101 and above	e 8	32 ·	2

8.4 The selection of packets from the lot and sheets from the packets shall be done at random and in order to ensure the randomness of

selection, the procedure given in IS: 4905-1968\*, may be followed.

8.5 From the selected packages as in col 1 and 2, approximately the same number of sheets shall be selected at random from the packages so as to obtain the required number of sheets as given in col 3.

8.6 Criteria for Conformity — All the sheets drawn in 8.3 shall be tested for dimensional stability, size, squareness of sheets and corner rounding. If any of the sheets fails to satisfy any one of these requirements, it shall be termed as defective. The lot shall be declared as conforming to the requirements of this specification if the number of defectives is less than the number given in col 4 of Table 2.

<sup>\*</sup>Methods for random sampling.